

Part 8: Decision Making

Overview

Decisions for transportation investments require the consideration of a variety of inputs. It is important that decisions consider land use impacts on transportation, alternative strategies to address roadway congestion, and project selection criteria so that the Goals and Objectives of the 2030 Long Range Transportation Plan (LRTP) are achieved.

Land Use and Transportation Coordination

Background

Transportation services and land use are dependent upon one another. For example, roads get congested when there are too many vehicles in an area with too few lanes, while successful mass transit service depends having a large potential pool of riders going from one place to another. Transportation and land use planners are always looking to strike a balance between demand from surrounding land uses and supply from the transportation system.

Development of land is usually driven by a number of factors: community need or desire for specific land uses, government policies, the natural and built environment, and others. Development decisions are usually made on a local municipal basis. Large-scale transportation decisions however are generally made on a regional basis. Coordination of these two types of decisions is necessary to ensure the even and successful development of both.

Coordination of Land Use and Transportation

Transportation and land use in the City of Wichita and Sedgwick County is coordinated by the Metropolitan Area Planning Commission (MAPC) and is supported by staff from the Wichita-Sedgwick County Metropolitan Area Planning Department (MAPD). Commission responsibilities include holding public hearings and making recommendations on development. A key report that is issued by the MAPC is the Wichita-Sedgwick County Comprehensive Plan. The latest plan was issued in 1999 and transportation was an element of this plan. The WAMPO 2030 LRTP will be a stand-alone document as well as provide the transportation element of the Comprehensive Plan.

In the 1999 Wichita-Sedgwick County Comprehensive Plan Update, the Planning Commission had two areas of focus (Figure 3.8-1):

1. Encouraging infill and redevelopment in existing neighborhoods in Wichita.
2. Preparing for continued growth on the city's fringe.

The recommendation was: "...current, low density development/growth patterns on the edges of Wichita are desirable, are justified by marketplace factors, and should be encouraged in the future"

These land use goals will affect future decisions on the types of transportation services and infrastructure that will best address demand from these growing areas. The transportation system may also be affected by redevelopment in Wichita, if residential and/or employment densities or existing land use types are changed. This information was used as a starting point in the development of the 2030 LRTP.

Wichita Residential Enhancement Strategies

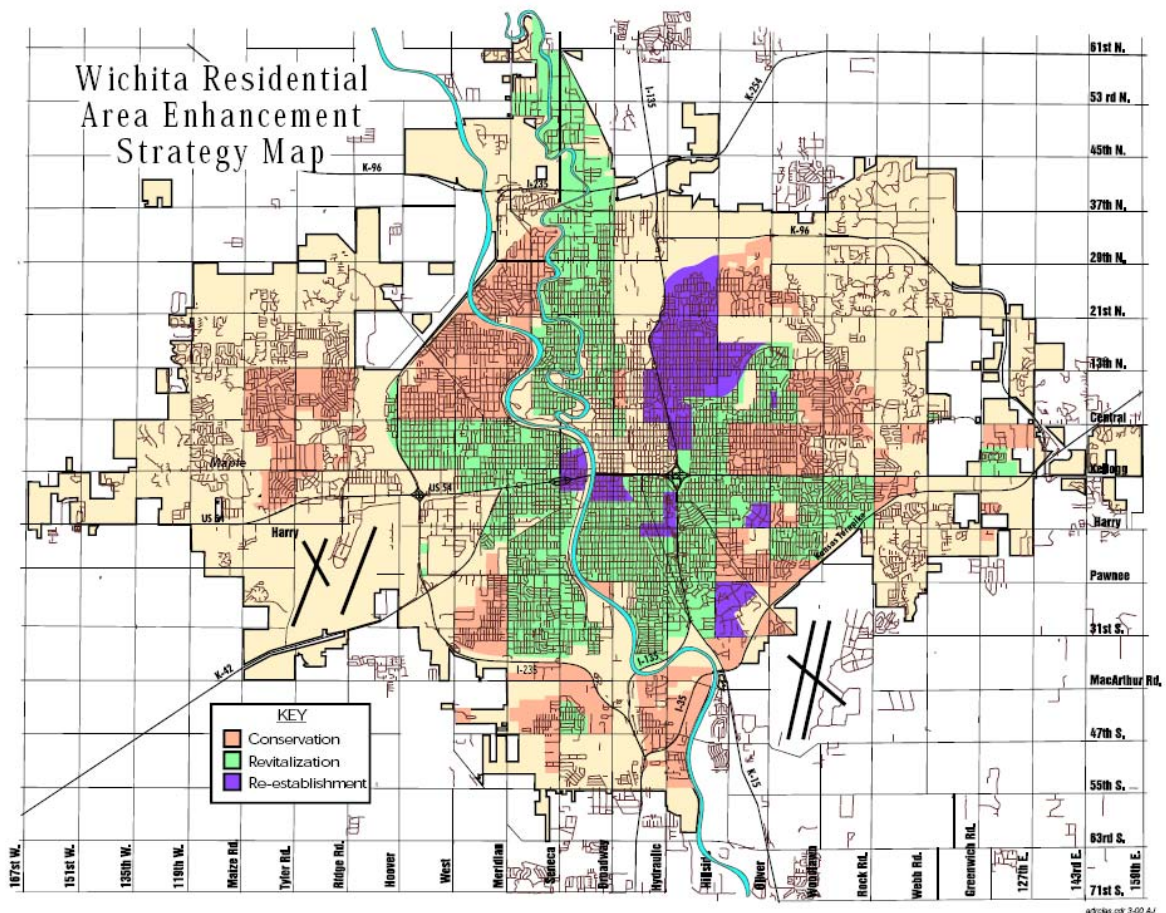


Figure 3.8-1: Wichita Residential Enhancement Strategies

Congestion Management System

Federal Requirements

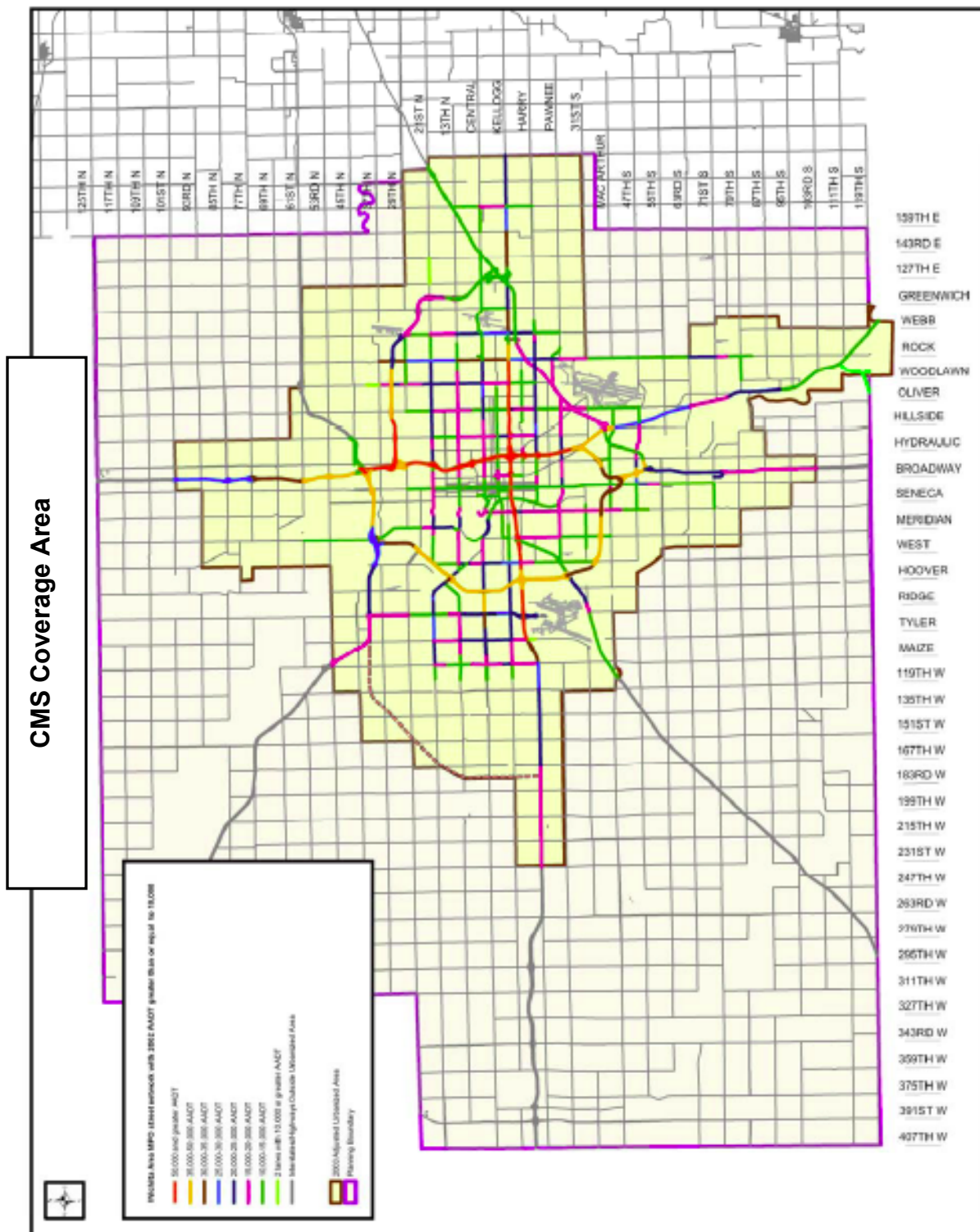
In accordance with Code of Federal Regulations 23 CFR 450-320(c) and 23 CFR 500.109, all transportation management areas, with a population greater than 200,000 must develop, establish, and implement a Congestion Management System (CMS) as part of the metropolitan planning process. The CMS is an important component because of the need to improve mobility, mitigate congestion, and enhance transportation planning in the metropolitan area. The specific requirements from Code of Federal Regulations Part 500.109 state that the CMS shall address the following aspects:

- System Monitoring
- Performance Measures
- Congestion Identification
- Mitigation Strategies
- Implementation of Strategies
- Monitoring of CMS effectiveness

WAMPO CMS Policy

The Wichita Area Metropolitan Planning Organization (WAMPO) adopted a CMS Policy in February 2005. The intent of this document is to provide a framework to carryout CMS in the Wichita metropolitan urbanized area. The CMS coverage area (Figure 3.8-2) and a system wide CMS network (Figure 3.8-3) were developed and are monitored based on performance measures such as the amount of time it takes to travel a defined distance and how many vehicles a road is designed to carry versus the number of vehicles actually using the road. A Performance Monitoring plan was developed and the MPO currently maintains a database of traffic volumes, capacities, and will develop the travel time dbase in the future.

Five specific evaluation strategies were identified as part of the policy. The MPO developed a process to implement and manage selected strategies. Monitoring the effectiveness of strategies will be done as areas are identified, mitigation techniques are applied, and the areas are observed over time for change.



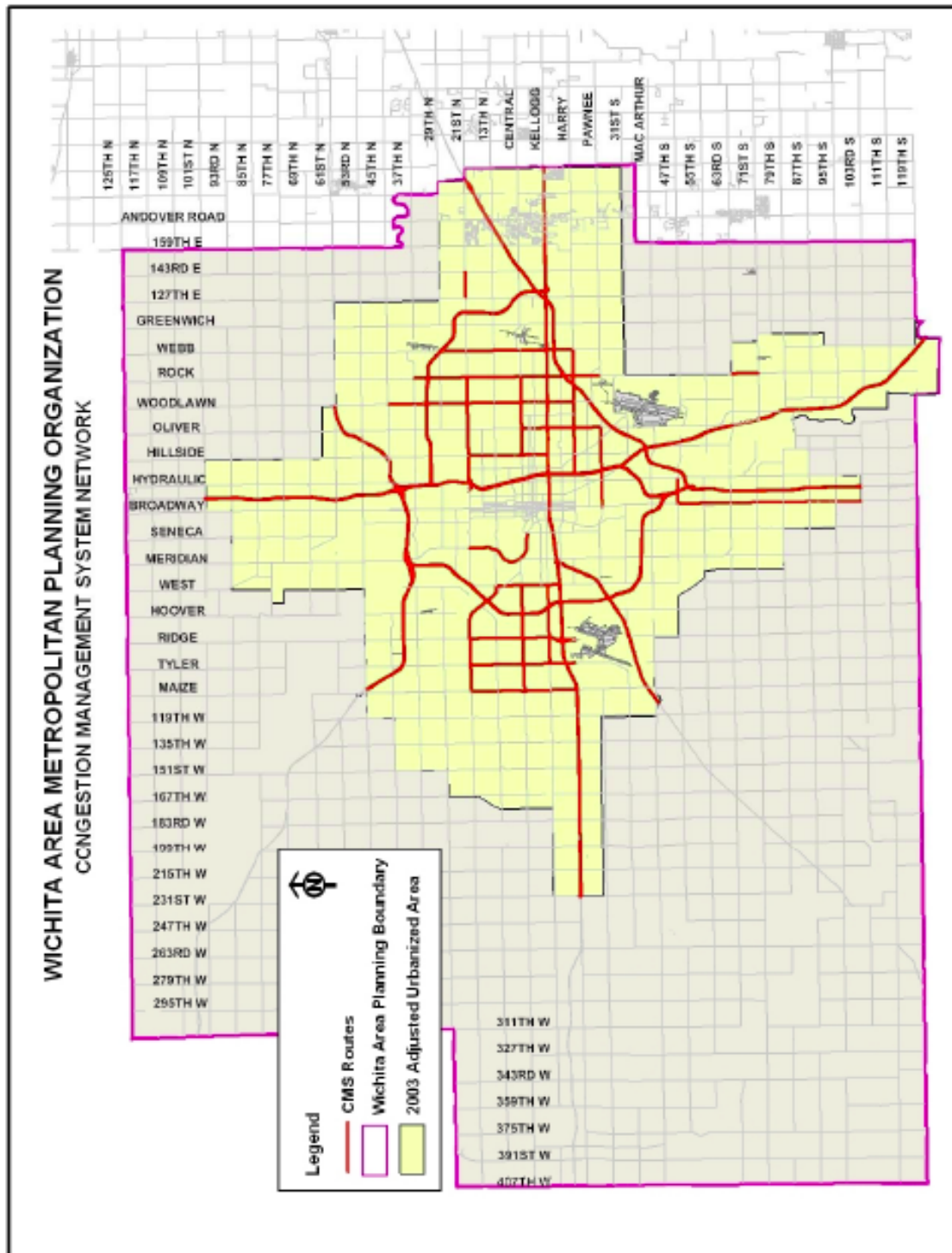


Figure 3.8-3: System-Wide CMS Network

Project Selection Criteria

Project Selection Criteria are being developed in conjunction with the LRTP to help decision makers achieve the Goals and Objectives of the Transportation Plan. Following adoption by WAMPO, these criteria will be used in the future to develop the projects that will be included in the Transportation Improvement Program (TIP), the listing of projects that will be implemented within the next three to five years.

Project Selection Criteria provide a quantitative means of evaluating, comparing, and prioritizing projects for street, intersection, and bridge improvements. Criteria normally fall under one or more of the following categories: traffic operation, traffic safety, system preservation, and benefit to the region. This listing is not intended to be all inclusive.

Traffic Operations criteria include existing and/or forecasted future:

- Traffic Volumes
- Level of Service
- Traffic Volume/Roadway Capacity
- Travel Times or Speeds
- Traffic Delays at Intersections
- Impacts on the environment

Traffic Safety criteria normally make use of existing data and can include:

- Numbers of motor vehicle accidents
- Accident Rates (average number of accidents that occur for a given volume of traffic)
- Accident Severity

System Preservation criteria include:

- Existing pavement or bridge condition
- Pavement Management System Rankings

Benefits to the Region criteria may include:

- Special Projects
- Geographic distribution of projects
- Benefit to Cost ratio
- Local Funding Match
- Land Use Strategies

Summary

Transportation investments require a decision making process that begins with the LRTP and moves through a process to identify potential improvements, evaluate and consider their impacts, then prioritize and select those projects that should be carried forward and placed on the TIP.

Where the LRTP sets the goals and objectives for the region, the TIP establishes the short range projects that carry them out. Projects on the TIP will be implemented within the next three to five years.

As part of the process to select roadway capacity improvement projects, alternative means of handling traffic congestion should be considered by following the Congestion Management System Policy and making use of the CMS Toolbox. Project Selection Criteria should be used to prioritize improvement projects. In addition, transportation improvements must be coordinated with land use plans and land use changes/developments must consider their impacts on the transportation system.